August-19-13 11:28:24 AM

Revision ID:	D3183-043 Bracket Assembly	18	1.04	Accept	*	N900	040	100)*	Setup Sta		S1* S2*
	8/19/13 Start Q	ty: 8.00 2ty: 8.00	*8* *8*		,	Cust Item I	D:					,
Approvals:	Process Plan:H_C	and the second second	Date: 13-08-19		· .		ıte:			Run Sta	17	R1*
Sequence ID/ Work Center II	Operatio Descript			Set Up/ Run Hours	1	Tool ID	Tool #	Plan Code	Accep Qty	t Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr											,
D3183	Rev C1				•							
¹⁰⁰ * 1 ሰሽ*	BAND SA	W		0.00	NH	13/08/	18		18	9/		+
Bandsaw Jeaspa ^l Bandsaw		Memo Cut blanks: (1	.500" x 2.250") 5.500" lo	0.00 ng		·		•	,	. 		<u> </u>
*110 *** *110* HAAS 1	HAAS CN		MACHINING #1	0.00		St 13	13-9-10	?	18			
HAAS CNC vertical	machine #1		3183-3 as per Folio FA322 cribe batch number		ntify as D3		: (2 ()Ć			٠.		
120 *120* QC Quality Control	QC2-Inspe	ect parts off ma	chine FAI/FAIB	0.00	· · · · · · · · · · · · · · · · · · ·	SL 1	3-9-10	> 9	18	· · · · ·		
•	- 1 · · · · · · · · · · · · · · · · · ·											

DQA: Date: **WORK ORDER NON-CONFORMANCE / UPDATE** Yes / No NCR: QA Closed: Date: **DISPOSITION** AGAINST DEPARTMENT/PROCESS Work Order: Water Jet Crosstube Engineering Rework Skid-tube Machining Prod. Eng. Coor. Quality Small Fab Scrap Part No. Other Use-as-is Thermoforming Finishing Rec/Store/Packaging Supplier Composite NCR No. Work Order Update Large Fab Description of work order update Action Initial Sign & Root or Non-conformance Chief Eng Verification QC Inspector Qty Description Date Date Step Cause Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General

	Bending	Bend	Grain	Ovalized	L	Pressure/Forced
Γ	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance		Temperature/Cure
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect		Weld
	Crushed/Crimped	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing		Wrong Stock Pulled
	Cuffs	Contamination	Maintenance	Part Moved		
Γ	Heat Treat	Countersink	Mislabeled	Positioned Wrong		_
Γ	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge		Other
	Ripples in Bend	Drill Holes	Offset			
	Torque Waves in Extrusion	Drawing	Out of Calibration			
	Turning Sequence	Finish	Out of Sequence			
	Wave/Twist in Tube	Folio	Outside Dimensions			

				· ·								
Work Orde		5803		*105803*								Page 2
Revision ID:	D3183-043 Bracket Assen	nbly		Accept	*N900	040	100)* s	Setup S	Start Stop		S1* S2*
Start Date: Required Date: Reference:	8/19/13 9/03/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		Cust Item II Customer:	D:						
Approvals:	Process Pla	n: /	Date:	Tooling:	Da	te:		F		Start	*NI	R1*
			Date:	SPC (Y/N):	Da	te:			\$	Stop	*NI	R2*
Sequence ID/ Work Center ID)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rejec Qty		leject lumber	Insp. Stamp
130		QC8- Inspect parts - sec	ond check	0.00	0 1	,						
130		Memo		0.00	Th 13/0	9/11		13	B			
Quality Control												
140				0.00				*				On
140		Small Fab		0.00				MX				10 C
Small Fab	•	Memo	03183-043 as ner Dwg I									

150

150

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00 SMB 0.00 B911

									DQA:	Date:	
NCR: Yes	s / No				WORK ORDER NON-C	ONFOR	MANCE / UP	PDATE	QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No NCR No					Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ad	ction	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data					· · · · · · · · · · · · · · · · · · ·						
Equip/Tooling							į				
Operator							1				
Material											
Setup									i		
Other				v	•						
Process	1.				•						
Supplier											
Training											
Unapproved	1										
					F/	AULT CATE	GORY				··

ndin	g Gear		General		_	 _
	Bending	Bend	d .	Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	ВОМ	1/Route	Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broke	en/Damaged	Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped	Burrs	5	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Conta	amination	Maintenance	Part Moved	
	Heat Treat	Coun	ntersink	Mislabeled	Positioned Wrong	_
	Inspection Strip in Tube	Cut To	oo Short	 Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill	Holes	Offset		
	Torque Waves in Extrusion	Draw	ving	Out of Calibration		
	Turning Sequence	Finish	h	Out of Sequence		
ſ	Wave/Twist in Tube	Folio)	Outside Dimensions		

Work Order ID 105803

QC

Quality Control

105803

Page 3

August-19-13 11:28:24 AM D3183-043 Accept Item ID: *N900040100* Setup Start **Revision ID:** Stop Bracket Assembly Item Name: Start Qty: 8.00 **Start Date:** 8/19/13 Cust Item ID: Required Date: 9/03/13 Req'd Qty: 8.00 **Customer:** Reference: Run Process Plan: Approvals: Date: **Tooling:** Date: Stop Date: **SPC (Y/N):** Date: Sequence ID/ Tool # Plan Operation Set Up/ Tool ID Reject Reject Accept Insp. Number Stamp Work Center ID Description Qty Code Oty **Run Hours** 160. Identify as per dwg & Stock Location: 51235B *160* Packaging 0.00Memo Packaging QC21- Final Inspection - Work Order Release 0.00 170 *170*

0.00

Memo

												DQA.		ite.	
NCR: Y	es/	/ No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE		QA Closed:	Da	ite:	
Work Orde	r.					DISPOSITION			·	AGAINS	r DE	PARTMENT			
Part N	- . lo.					Rework Scrap Use-as-is Work Order Update		t Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fal Finishin Composite		4 .	Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update	1	Initial	Ac	tion		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			<i>®</i> }	\$0.4							-				
, ,						F	AUL	T CATE	GORY				· · · · · · · · · · · · · · · · · · ·		` ` `
Landi		Bending Centre No	ot Conce	ntric to	o/s	General Bend BOM/Route		Grain Hardwa				Ovalized Over/Under Part Incorred			Pressure/Forced Temperature/Cure Weld
,		Cracks Crushed/ Cuffs Heat Trea				Broken/Damaged Burrs Contamination Countersink		1 '		Unclear		Part Incorred Part Lost/Mi Part Moved Positioned W	ssing		Wrong Stock Pulled
	-	Inspectio	-	Tube		Cut Too Short		Misread	I			Power Loss/	Surge		Other
	1 1	Ripples in	n Bend			Drill Holes	1	Offset							

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drawing

Finish

Folio

Picklist Print

August-19-13 11:28:27 AM

Work Order ID: 105803

105803

Parent Item:

D3183-043

D3183-043

Parent Item Name: Bracket Assembly

Start Date: 8/19/13

Required Date: 9/03/13

Page 1

Start Qty: 8.00

Required Qty: 8,00

Comments:

IPP Rev:Pick:A04.02.18New issueKJ/DS

IPP Rev:B Changed Mat Size 08-06-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Status Issued
D3183-045		Manufactured	No			100	Each	69.0000	2 .	16	2	
D3183-04 Bearing Assembly	45	•							**	4	S3/1	07/11
				Location	1	Loc	Oty	Loc Code	_			
				FG			5		_			-6110
					88587		5		-		7	105798
	e.			ST235B			55					10 -
•				•	103893		16		_	- 4	ລ	1059531
					105621		39				·	ا د ما ح
				ST236			9		_	<u> </u>		
			.,		102692	1.40	9	50,0000	_	_		
D3121-21		Manufactured	No			140	Each	50.0000	2	16	9	(
D3121-2	1								**			13 [05])
Bolt												
•				Location	<u>1</u>	<u>Loc</u>	Oty	Loc Code				
				ST235			50		_	•		
					102053 102765		1		-	36	-	
					99292		45 4		_		-	
M174B1.500X02.250		Purchased	No		,,2,2	140	f	23.8937	0.4583	3.859368	}	
	EOOVOO								**	5,00,00		
*M174R1	らいいメロノ	ノ わい"							-			
17-4 SS Bar 1.50 X2.250				Location	•	Loc	Qty	Loc Code		•		
				MAT049	_		.8937	Lot Code				
				WIA 1 U45	113568		.9037 .9037					
					115806	•	0.4		_		•	
					124158		1.37		_			n /20/12
				-	m126132		20.22		_	8561	MM	16/10/01

NCR:	Yes	/	No

DQA:

Date:

NCR: Ye	es / No				WORK ORDER NON-C	CONFOR	MANCE / UP	DATE	QA Closed:	Date	· ·
					Ĭ	T T			· · · · · · · · · · · · · · · · · · ·		
Work Order	·•				DISPOSITION			AGAINST DE	PARTMENT,	/PROCESS	
Part No				• .	Rework Scrap		Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR No	o				Use-as-is Work Order Update	Ther	moforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root		:		Descri	ption of work order update	Initial	Ad	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Ooc/Data quip/Tooling	:										
Operator Material											
etup					•						
Other											
rocess											
Supplier					•						
raining								, e			
Jnapproved						<u> </u>					
					F	AULT CATI	GORY				
Landin	g Gear				General				7	_	
	Bending	•			Bend	Grain			Ovalized	L	Pressure/Forced
_	Centre No	ot Conce	ntric to (D/S	BOM/Route	Hardw		_	Over/Under	⊢ -	Temperature/Cure
1	Cracks				Broken/Damaged	⊢ '	tion Incomplete		Part Incorred	<u> </u>	Weld
L	Crushed/	Crimped			Burrs	\blacksquare	tions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination	—	enance	<u> </u>	Part Moved		
, [Heat Trea	at			Countersink	Mislab	eled		Positioned V		
Ĺ	Inspectio	n Strip in	Tube		Cut Too Short	Misrea	ıd		Power Loss/	Surge	Other
	Ripples in	n Bend			Drill Holes	Offset					
	Torque V	Vaves in I	Extrusio	า 🗌	Drawing	Out of	Calibration				
Ī	Turning S	equence			Finish	Out of	Sequence				
t	Wayo/Tu	ict in Tul	ho		Teolio	Outsid	a Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order: /05803	
Description: Bracket	Part Number: D3183-3	
Inspection Dwg: D3183 Rev: C1	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing	<u>.</u>	Actual			Method of	
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
R0.190	+/-0.030	_KK	1/		Rele	
R0.063	+/-0.010	1063	//		R-C	
0.182	+/-0.010	-18			Vein	21-10
0.070	+/-0.010	-071			1	2 ! (V
0.100	+/-0.010	-101				· · · · · · · · · · · · · · · · · · ·
Ø0.201 x 0.100	+/-0.010	-1962-100			ĺ	
0.182	+/-0.010	-182				
5.32	+/-0.030	5.32				
5.036	+/-0.010	5,034			#6	
2.120	+/-0.010	2.120			-	
1.290	+/-0.010	1,290	-		Vecn	JL-10
0.365	+/-0.010	_365			`	
0.218	+/-0.010	-2B			_	· · · · · ·
1.030	+/-0.010	/,030				, , , , , , , , , , , , , , , , , , , ,
1.90	+/-0.030	1.888			~	
1.012	+/-0.010	1-011			-	
Ø0.201 x 0.100	+/-0.010	198x.098				
0.786	+/-0.010	-449			#G	
Ø0.392	+0.002/-0.000	392			mic	V-4
R0.19	+/-0.030	-188			2-6-	
3.954	+/-0.010	3,954			ÎLG-	
0.162	+/-0.010	./60			Vern	7119
R0.19	+/-0.030	-188			7	31. 10
R0.25	+/-0.030	-250			•	***
4.26	+/-0.030	4.260			} -	
2.080	+/-0.030	2.100			-	
1.155	+/-0.010	7.160				
0.162	+/-0.010	-166			¥	
0.36	+/-0.030	-353			-	
0.615	+/-0.010	-610				
0.435	+/-0.010	-431	1			· · · · · · · · · · · · · · · · · · ·
0.200	+/-0.010	-199				
0.381	+/-0.010	.376				
0.032	+/-0.010	-026	/		D-G	

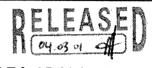
Measured by:	SL	Audited by:	ant.	Prototype Approval:	N/A
Date:	13-9-6	Date:	13/09/11	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	03.11.12	New Issue P/O D3183-043	KJ/RF	
В	04.03.15	Changes as per revision C	KJ/JLM/RF	
С	06.03.09	Dwg Rev update	KJ/JLM ,	
. D	08.01.28	0.182 dimension removed	KJEC/DD A	77





		· ·	The state of the s	
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKE	APPROVED	D3183	REV. C	
04.02.17		BRACKET ASSEMBLY	SCALE 1:1	
Α.	03.01.24	NEW ISSUE		

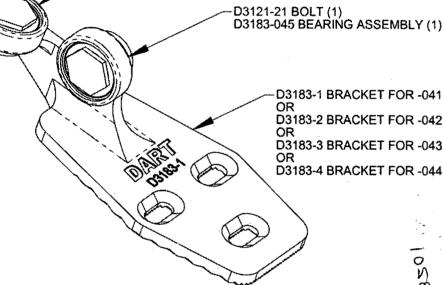


DEO ATTACHED

<u>"" </u>		SHEET 1 OF		
DATE		TITLE	SCALE	
	04.02.17	BRACKET ASSEMBLY	1:1	
Α	03.01.24	NEW ISSUE		
В	03.06.17	REMOVE BEARING; 1.012 WS 0.882	2	
С	,04.02.17	ADD -045/-9; 0.182 WAS 0.431		
Cı	1-4-77 04.11.09	0-830 WAS 0-850		

D3121-21 BOLT (1)

D3183-045 BEARING ASSEMBLY (1)



D3183-1 BRACKET FOR -041 (SHOWN)

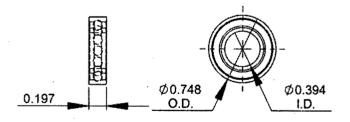
D3183-2 BRACKET FOR -042 (OPPOSITE)

D3183-3 BRACKET FOR -043 (SIMILAR)

D3183-4 BRACKET FOR -044 (SIMILAR)

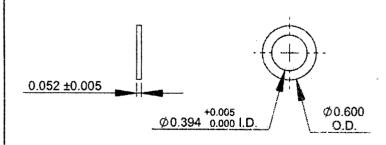
ENCOS

D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR) D3183-044 BRACKET ASSEMBL



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

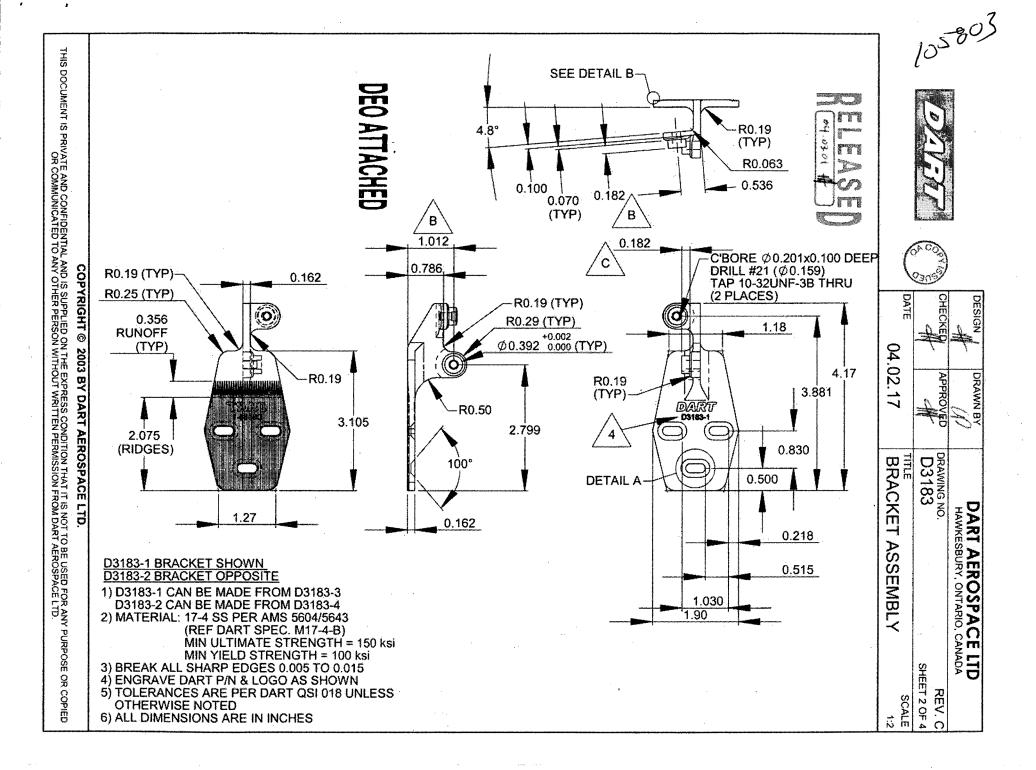
- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

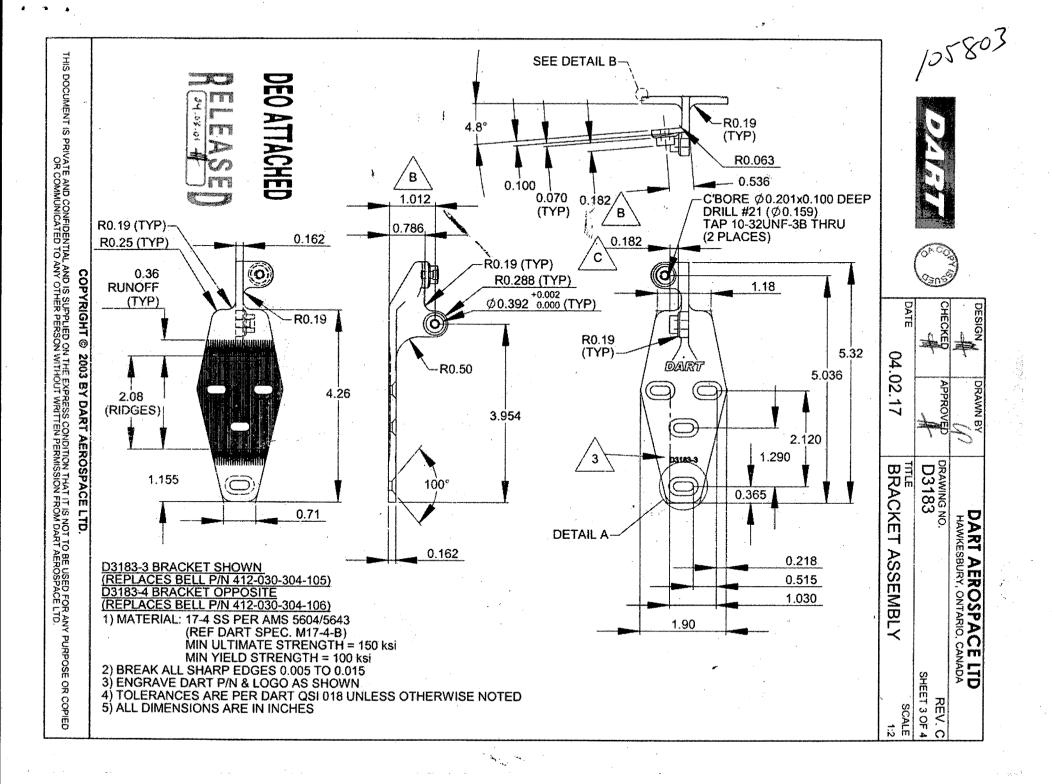


D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) **ANNEALED**
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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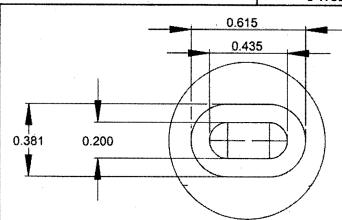








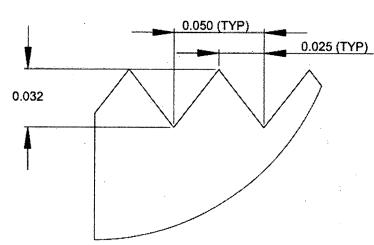
		·		
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED	APPROVED	D3183	REV. C SHEET 4 OF 4	
 04.02.17		BRACKET ASSEMBLY	SCALE	

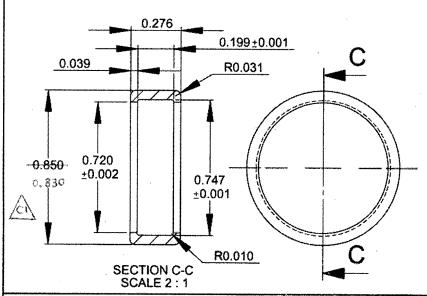


DETAIL A (2:1)

DEO ATTACHED

DETAIL B (20:1)





D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00 (REF DART SPEC. M-DELRIN-R1.00) 2) TOLERANCES ARE PER DART QSI 018
- UNLESS OTHERWISE NOTED
 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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105803

DRAWING	NO. TITLE		REVC1	DART AEROSPACE L	TD D.E.O. NO.	SHEET NO.	SCALE
D3183	BRACK	ET ASSEMBLY		ENGINEERING ORDE	ER D3183-C1-1	SHEET 1 OF 1	NTS
DRAWN	P	CHECKED		MFG. APPR.	APPROVED A	DE APPR.	
DATE	10.05.14	DATE	10.06.30	DATE (8,06.30	DATE 10/06/30	DATE 10/06/30	

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT:

Cr = 1720 N (386 lb) MIN [DYNAMIC]

Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012



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